[Savitch, "*Absolute C++*" – Chapter 1, Programming Project #4]

Negotiating a consumer loan is not always straightforward. One form of loan is the discount installment loan, which works as follows:

- Suppose a loan has a face value of $1,000, the interest rate is 15%, and the duration is 18 months.
- The interest is computed by multiplying the face value of $1,000 by 0.15, yielding $150.
- That figure is then multiplied by the loan period of 1.5 years to yield $225 as the total interest owed.
- That amount is immediately deducted from the face value, leaving the consumer with only $775.
- Repayment is made in equal monthly installments based on the face value. So the monthly loan payment will be $1,000 divided by 18, which is $55.56.

This method of calculation may not be too bad if the consumer needs $775, but the calculation is a bit more complicated if the consumer needs $1,000.

Write a program that will take three inputs: the amount the consumer needs to receive, the interest rate, and the duration of the loan in months. The program should then calculate the face value required in order for the consumer to receive the amount needed. It should also calculate the monthly payment.

Your program should generate output similar to the following:

```
Please enter the annual interest rate as a percentage (e.g., 15 for 15%) (enter 0 to
quit): 15
Please enter the amount you would like to receive: 1000
Please enter loan period in months: 12
The total amount of your loan (including interest at 15% per annum) is $1176.47.
Your monthly payment for 12 months will be $98.04.

Please enter the annual interest rate as a percentage (e.g., 15 for 15%) (enter 0 to
quit): 0

Exit code: 0 (normal program termination)
```